

SOF INTERNATIONAL MATHEMATICS OLYMPIAD 2024-25

DO NOT OPEN THIS BOOKLET UNTIL ASKED TO DO SO

CLASS **5**
SET-B

Total Questions : 50 | Time : 1 hr.

Guidelines for the Candidate

1. You will get additional ten minutes to fill up information about yourself on the OMR Sheet, before the start of the exam.
2. Write your **Name, School Code, Class, Section, Roll No.** and **Mobile Number** clearly on the **OMR Sheet** and do not forget to sign it. We will share your marks / result and other information related to SOF exams on your mobile number.
3. The Question Paper comprises four sections:
Logical Reasoning (15 Questions), **Mathematical Reasoning** (20 Questions), **Everyday Mathematics** (10 Questions) and **Achievers Section** (5 Questions)
Each question in Achievers Section carries 3 marks, whereas all other questions carry one mark each.
4. All questions are compulsory. There is no negative marking. Use of calculator is not permitted.
5. There is only ONE correct answer. Choose only ONE option for an answer.
6. To mark your choice of answers by darkening the circles on the OMR Sheet, use **HB Pencil** or **Blue / Black ball point pen** only. E.g.
Q. 16: Navya purchased a hand bag for ₹ 345.50, a pair of shoes for ₹ 480.25 and a cap for ₹ 75.50. How much money did she spend in all?
A. ₹ 901.25 B. ₹ 785.50 C. ₹ 895.75 D. ₹ 920.25
As the correct answer is option A, you must darken the circle corresponding to option A on the OMR Sheet.
7. Rough work should be done in the blank space provided in the booklet.
8. Return the OMR Sheet to the invigilator at the end of the exam.
9. Please fill in your personal details in the space provided before attempting the paper.

16. ● (A) (B) (C) (D)

Name:.....

SOF Olympiad Roll No.:..... Contact No.:.....



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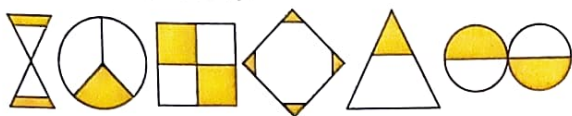
72
Countries

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8
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LOGICAL REASONING

- 1** How many of the following figures have more than one line of symmetry?



- A. 2
B. 4
C. 5
D. 3

- 2** Find the missing number, if a certain rule is followed either row-wise or column-wise.

F	H	48
I	C	27
G	D	?

- A. 28
B. 32
C. 35
D. 26

- 3** A lady travels 3 km towards North. She then turns right and travels 6 km. Finally she turns left and travels 3 km. In which direction is she now with respect to her starting point?

- A. North
B. North-East
C. South-West
D. East

- 4** Some letters are numbered 1, 2, 3, 4, 5 and 6 as given below. Arrange the given letters to form a meaningful English word and select the CORRECT option.

C A R D E N
1 2 3 4 5 6

- A. 5, 2, 6, 4, 1, 3
B. 2, 5, 4, 1, 3, 6
C. 4, 2, 6, 1, 5, 3
D. 3, 4, 5, 1, 6, 2

- 5** Some digits are coded in a certain code language as given below.

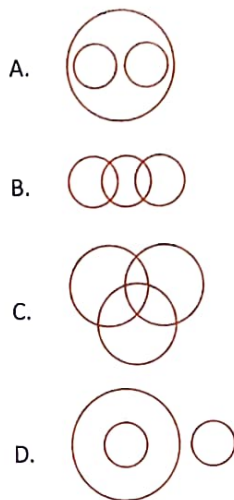
Digits	4	7	3	1	9	2	6	5
Codes	÷	D	T	\$	©	@	K	#

What will be the code for 794615?

- A. D©@÷#\$
B. D©÷K\$#

- C. T©÷@#\$
D. D\$÷K#T

- 6** Which of the following Venn diagrams best represents the relationship amongst, "Languages, English and Hindi"?



- 7** If Vani went for volleyball practice every day in January 20XX except the dates which are divisible by 5, then for how many days did she go for volleyball practice in that month?

JANUARY 20XX						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

- A. 26
B. 24
C. 27
D. 25

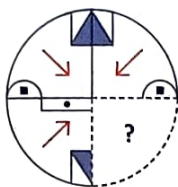
- 8** Read the given information carefully and answer the following question.

- Aniket and Kabir like swimming and reading.
- Sonal and Monika like cooking and reading.
- Only Monika like dancing.

Who amongst the following like more than two activities?

- A. Kabir
B. Sonal
C. Aniket
D. Monika

- 9 Select a figure from the options which will complete the given figure pattern.



- A.
- B.
- C.
- D.

- 10 Select the odd one out.

- A. FJH
B. RVT
C. KPM
D. TXV

- 11 Select the CORRECT water image of the given figure.



- A.
- B.
- C.
- D.

- 12 A man is standing in a queue of 28 people on a bus ticket counter. His position is 9th from the front. If 3 people behind him leave the queue, then what will be his new position from the end of the queue?

- A. 16th
B. 18th
C. 17th
D. 15th

- 13 Shubham travels from Delhi to Bhopal via train as per the time shown in the clocks. For how long did he travel?



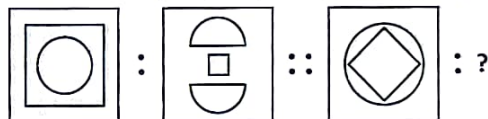
Train left Delhi
(Morning)



Train arrived at Bhopal
(Afternoon)

- A. 7 hrs 15 mins
B. 8 hrs 45 mins
C. 8 hrs 35 mins
D. 7 hrs 45 mins

- 14 There is a certain relationship between the pair of figures on the either side of ::. Identify the relationship between the left pair and find the missing figure.

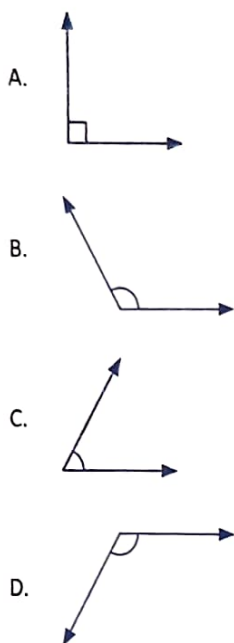


- A.
- B.
- C.
- D.

- 15 In a group of 5 students P, Q, R, S and T; P scored more than S, Q scored less than T and S scored more than T. If R scored the least, then who amongst the following scored the highest?

- A. P
B. S
C. T
D. Q

- 16** Which of the following options shows an acute angle?



- 17** The difference between the 15th multiple of 20 and 9th multiple of 9 is _____.

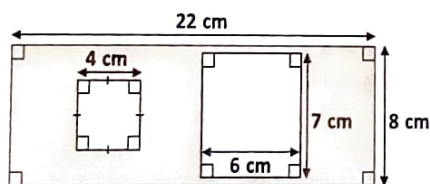
- A. 169
B. 219
C. 200
D. None of these

- 18** The shaded decimal part for the given figure is _____.



- A. 0.5
B. 0.725
C. 0.625
D. 0.25

- 19** Find the area of the shaded part in the given figure (not drawn to scale).



- A. 139 sq. cm
B. 118 sq. cm
C. 126 sq. cm
D. 152 sq. cm

- 20** Select the CORRECT option.

- A. $25791 = 20000 + 50000 + 700 + 90 + 1$
B. $72865 = 70000 + 2000 + 800 + 60 + 5$
C. $42871 = 4000 + 2000 + 800 + 70 + 1$
D. $34625 = 30000 + 4000 + 6000 + 20 + 5$

- 21** How many line(s) of symmetry is/are there in the given figure?



- A. 2
B. 0
C. 1
D. 3

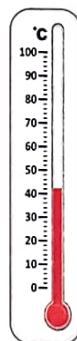
- 22** The given table shows the cost of shirt and pair of trousers at three different shops. Study it carefully and answer the question that follows.

	Shop A	Shop B	Shop C
Shirt	2 for ₹ 1500	3 for ₹ 2100	1 for ₹ 600
Pair of Trousers	1 for ₹ 900	2 for ₹ 1700	3 for ₹ 2100

If Ankur bought two pair of trousers and 1 shirt from shop B, then find the total amount spent by him.

- A. ₹ 2400
B. ₹ 1700
C. ₹ 2250
D. ₹ 2800

- 23** Which of the following options represents the temperature shown on the given thermometer?



- A. $70^{\circ}\text{C} - 39^{\circ}\text{C}$
B. $20^{\circ}\text{C} + 21^{\circ}\text{C}$
C. $80^{\circ}\text{C} - 38^{\circ}\text{C}$
D. $35^{\circ}\text{C} + 16^{\circ}\text{C}$

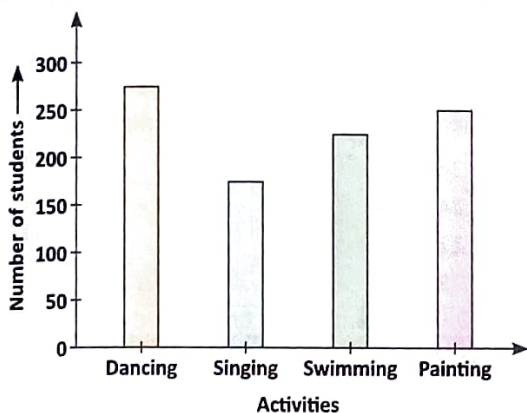
- 24 Which of the following options gives the **GREATEST** value when rounded off to the nearest thousands place?

A. 69450
B. 69857
C. 68999
D. 57293

- 25 Compare the following and select the **CORRECT** option.
 $51780 + 29371 - 10258$ ☐ $38542 + 52509 - 41002$

A. >
B. <
C. =
D. Can't be determined

DIRECTIONS (26-27) : The given bar graph shows the different activities liked by the students of a school. Study the given graph carefully and answer the following questions.



- 26 If $\frac{2}{5}$ of the number of students who liked swimming are boys, then how many girls liked swimming?

A. 135
B. 175
C. 150
D. 205

- 27 What fraction of the total students liked dancing and painting together?

A. $\frac{12}{25}$
B. $\frac{21}{37}$
C. $\frac{13}{37}$
D. None of these

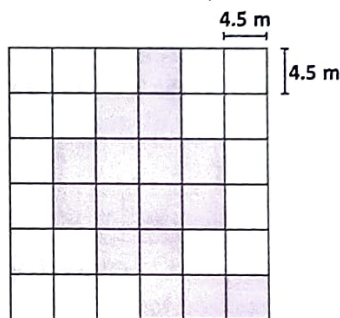
- 28 I am a decimal number. My decimal part is $\left[\frac{1}{4} \text{ of } 32\right]$ and my whole part is 2 more than $\left(\frac{2}{5} \text{ of } 20\right)$. Who am I?

A. 10.8
B. 10.08
C. 8.8
D. 8.68

- 29 Select the **CORRECT** option.

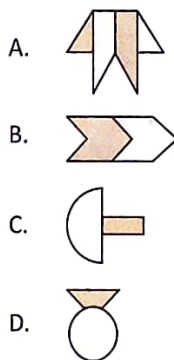
A. The value of $\left(\frac{3}{5} \text{ of } 195\right)$ is 117.
B. $5\frac{3}{9} - 2\frac{1}{7} = 3\frac{4}{21}$
C. The sum of $\left(5 \times \frac{3}{15}\right)$ and $\left(1\frac{1}{8}\right)$ is $3\frac{1}{8}$.
D. Both A and B

- 30 Find the perimeter of the **SHADED** part of the given figure (not drawn to scale).

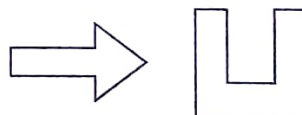


A. 95 m
B. 110 m
C. 108 m
D. 92 m

- 31 Which of the following figures does **NOT** have any line of symmetry?



- 32 How many angles are **MORE** than 90° inside the given figures?



A. 0
B. 4
C. 2
D. 3

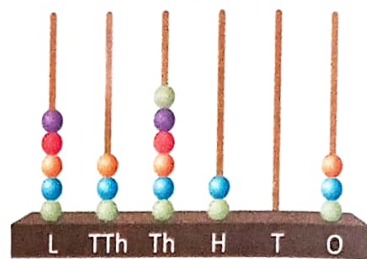
- 33 If the height of pole X is 17 m 58 cm and the height of pole Y is 3 m 11 cm less than that of pole X, then find the total height of both the poles.

A. 27 m 25 cm
B. 23 m 80 cm
C. 38 m 27 cm
D. 32 m 5 cm

- 34 The Roman numeral for 3539 is _____.

A. MMCDXXXII
B. MMMDXXXIX
C. MMMCDIX
D. MMMDXXIX

- 35 The number 7581 more than the number shown on the given abacus is _____.



A. 543784
B. 479582
C. 528622
D. 532784

EVERYDAY MATHEMATICS

- 36 The number of students enrolled for a scholarship exam is 2783. Which of the following Roman numerals represents the number of students enrolled?

A. MMCDLXXIII
B. MMDCCLXXXIII
C. MMMDCCXLII
D. None of these

- 37 The weight of Aarav is 42.675 kg. His friend Sumit is 3.25 kg heavier than him. If Kartik's weight is 1 kg 90 g less than Sumit, then find the weight of Kartik.

A. 35.835 kg
B. 49.375 kg
C. 38.715 kg
D. 44.835 kg

- 38 A farmer has to wire around his rectangular field 5 times. How much wire is required, if the length of the field is 175 m and the breadth of the field is 85 m?

A. 2000 m
B. 2800 m
C. 1800 m
D. 2600 m

- 39 In a particular branch of XYZ bank, the number of new savings accounts opened in the years 2022 and 2023 were 35780 and 27189 respectively. How many total savings accounts were opened in both the years?

A. 62969
B. 59371
C. 65782
D. 61369

- 40 Pooja went for holiday in Himachal Pradesh. She recorded the temperature in the afternoon as 25°C and it got reduced by 11°C in the night. Find the temperature of that place in the night.

A. 36°C
B. 14°C
C. 12°C
D. 15°C

- 41 In a certain year, the number of tourists who visited Varanasi was 7500. If $\frac{2}{5}$ of them were from America, $\frac{1}{10}$ of remaining were from Canada and rest were from other countries, then how many tourists visited from the other countries?

A. 3500
B. 2700
C. 4425
D. 4050

- 42 A library has 30 racks. Each rack has 25 shelves and there are 50 books on each shelf. Find the total number of books in the library.

A. 28150
B. 42500
C. 36150
D. 37500

- 43 Nitin walked along a square field and covered 812 m in 7 rounds. Find the area of the field.

A. 784 sq. m
B. 625 sq. m
C. 841 sq. m
D. 729 sq. m

- 44 Vishal bought 5 caps having digits 5, 1, 9, 3 and 2 written on the caps. What is the greatest 5-digit number that can be formed from the digits written on the caps (using each digit exactly once)?

A. 93521
B. 95321
C. 12359
D. 99999

- 45 Priya travelled 212 km 380 m distance by train, 18 km 385 m distance by scooter, 120 km 280 m distance by car and 120 m distance by walk. How much total distance did she travel?

A. 333.162 km
B. 341.166 km
C. 351.165 km
D. 352.165 km

ACHIEVERS SECTION

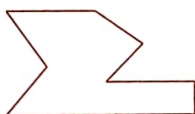
- 46 Read the given statements carefully and state T for true and F for false.

- (p) The Roman numeral MMCMXLVI is meaningless.
(q) The place value and face value of the digit at thousands place in the number 750892 are same.
(r) The predecessor of the greatest 6-digit number is 1000000.
(s) 1 million is same as 100 lakhs.

	(p)	(q)	(r)	(s)
A.	F	F	T	T
B.	T	T	F	F
C.	T	F	F	T
D.	F	T	F	T

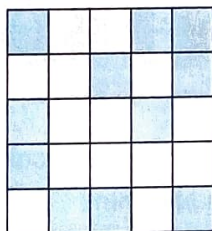
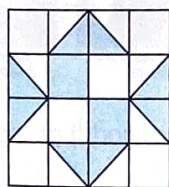
- 47 Fill in the blanks and select the CORRECT option.

- (i) The angle whose measure is less than 360° but more than 180° is _____ angle.
(ii) The smaller angle between the hands of a clock at 6 : 15 is a/an _____ angle.
(iii) The number of acute angles inside the given figure is _____.



	(i)	(ii)	(iii)
A.	Reflex	Obtuse	3
B.	Reflex	Acute	4
C.	Acute	Right	4
D.	Obtuse	Obtuse	3

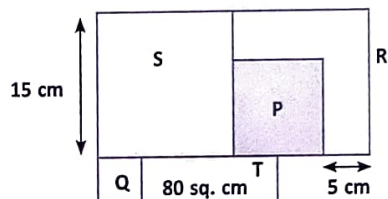
- 48 The sum of number of lines of symmetry in the given figures is _____.



A. 0
B. 1

- C. 2
D. None of these

- 49 The given figure is made up of four squares P, Q, R and S and a rectangle T. The area of rectangle is $3\frac{1}{5}$ times the area of square Q.



- (p) Find the sum of areas of squares Q and S.
(q) Find the area of unshaded part in the given figure.

	(p)	(q)
A.	225 sq. cm	410 sq. cm
B.	250 sq. cm	355 sq. cm
C.	250 sq. cm	455 sq. cm
D.	200 sq. cm	355 sq. cm

- 50 The given two clocks show the time in the morning. Observe the given clocks carefully and select the INCORRECT option.



Clock P



Clock Q

- A. If the clock P is 1 hour 25 minutes slow, then the correct time (24 hour clock) in clock P will be 08 : 40.
B. If a train leaves a station at the time shown in clock Q and it takes 7 hours 20 minutes to reach the destination, then it will reach the destination at 16 : 50.
C. If the clock P is 1 hour 25 minutes slow and clock Q is 30 minutes slow, then the time duration between the actual time on the two clocks is 25 minutes.
D. Both B and C